

REMARKS

In response to the above-identified Final Office Action ("Final Action"), Applicant traverses the Examiner's rejection to the claims and seeks reconsideration thereof. Claims 1-14 are now pending in the present application. Claims 1-6 have been withdrawn. In this response, Claims 10, 13 and 14 have been amended, no claims have been added and no claims have been cancelled.

The instant claims are directed to a method for fabricating a magneto-optical storage medium having a sublayer, comprising steps of, forming the sublayer of an alloy containing a transition metal; forming a recording layer on which information is recorded and stored; and performing thermal treatment on the sublayer, wherein a crystalline structure of the sublayer is changed into a crystalline structure that has a high magnetic anisotropy by the step of performing the thermal treatment, so that the high magnetic anisotropy energy of the sublayer is coupled to the recording layer.

I. Claim Amendments

Applicant respectfully submits herewith amendments to Claims 10 and 14. Claims 10 and 14 are amended to incorporate the limitations of all the base claims and any intervening claims pursuant to the Examiner's indication that the claims would be allowable if rewritten to overcome the rejections under 35 U.S.C. §112. Claim 13 is amended to place the claim in proper English form. Since the amendments to the claims do not add new matter and are supported by the specification, Applicant respectfully requests they be entered accordingly.

II. Claim Rejections – 35 U.S.C. §112, second paragraph

In the outstanding Final Action, the Examiner rejects Claims 7-14 under 35 U.S.C. §112, second paragraph, as being vague and indefinite on the basis that the term "high" in the phrase "high magnetic anisotropy" is a relative term of degree and the specification does not appear to define the limits of "high magnetic anisotropy." In particular, the Examiner argues the recitation of "a high magnetic anisotropy energy of about 7×10^7 erg/cm³" in the application is

only one *example*, and therefore does not teach or define what range of energies is covered by the recitation “high magnetic anisotropy.” See Action, page 2. Applicant respectfully disagrees with the Examiner’s conclusion.

It is well settled that “a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.” See *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Moreover, it is perfectly acceptable for the range covered by a claim term to be discerned from an exemplary embodiment provided within the specification. See *Oakley, Inc. v. Sunglasses Hut International*, 65 USPQ2d 1321 (Fed. Cir. 2003). For example, in *Oakley, Inc. v. Sunglasses Hut International*, the Federal Circuit determined the use of the phrase “vivid colored appearance” was not indefinite even though the specification failed to expressly define what was considered a “vivid” appearance. 65 USPQ2d 1321. The patent at issue in *Oakley* claimed a sunglass lens with three layers that created the “vivid colored appearance.” The specification, provided that the “vivid colored appearance” resulted from a “differential effect” produced by the lens’s structural attributes. The specification then went on to provide an example of the structural attributes and a differential effect capable of producing the “vivid” appearance. On this basis, the court determined the scope of the term could be discerned from the examples provided in the specification.

Similar to the patent in *Oakley*, Applicant’s specification describes how to achieve the high magnetic anisotropy energy and further offers an example of a value considered to be a high magnetic anisotropy energy. In particular, the specification provides that a high magnetic anisotropy may be achieved by forming the sublayer with alloys containing transition metals and then applying heat in an amount which is determined based on the constitutional elements of the sublayer. See Application, page 11. The application provides that in one embodiment heat may be applied at a temperature of 400 to 600 degrees. See application, page 11. The Application explains that the amount of heat applied causes the sublayer to have a phase transition into a crystalline structure (e.g. face centered cubic or face centered tetragonal) that has a big magnetic anisotropy. See Application, pages 11-12. In one example using the above process, a high magnetic anisotropy energy may be about 7×10^7 erg/cm³. See Application, page 12. The application provides that this energy is coupled to the adjacent recording layer so that it can

increase the coercive force of the recording layer. See Application, page 12. As a result, the coercive force of the recording layer of the magneto-optical storage medium is increased to a greater degree than where the sublayer is not provided. See Application, page 12. Thus, it is clear from Applicant's specification that a high magnetic anisotropy energy is within a range, including 7×10^7 erg/cm³, which may be achieved by the above-described process for forming the sublayer.

For at least the foregoing reasons, Claims 7 and 11 and their dependent claims are in compliance with 35 U.S.C. §112, second paragraph. In view of the foregoing, Applicant respectfully requests withdrawal of the rejection of Claims 7-14 under 35 U.S.C. §112, second paragraph.

III. Claim Rejections – 35 U.S.C. §102(b)

In the outstanding Office Action, Claims 7-9 and 11-13 are rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent 5,863,649 issued to Hirokane et. al. ("Hirokane"). Applicant respectfully traverses the rejection for at least the following reasons.

It is axiomatic to a finding of anticipation that each and every element of the claims are taught by the references. In regard to independent Claims 7 and 11, Hirokane fails to teach or suggest at least the elements of performing thermal treatment on the sublayer, wherein a crystalline structure of the sublayer is changed into a crystalline structure that has a high magnetic anisotropy by the step of performing the thermal treatment, so that a high magnetic anisotropy energy of the sublayer is coupled to the recording layer as recited in Claims 7 and 11.

The Examiner cites to several portions of Hirokane allegedly teaching each element of Claims 7 and 11 and suggests elements 3 and 5 of Hirokane teach a sublayer and recording layer, respectively. See Action, page 5, paragraph 7. Applicant argued in its previous response that these portions of Hirokane fail to teach the use of thermal treatment to change a crystalline structure of the sublayer into a crystalline structure that has a high magnetic anisotropy. In response to Applicant's arguments, the Examiner alleges in the instant Final Action that "some kind" of crystalline structure change must occur when the magnetization direction changes since the heating does not cause the compound to change chemically. See Action, page 3. The

Examiner further alleges that a high magnetic anisotropy is taught since the energy in Hirokane may be high as compared to any other layer having a lower energy level and that an in-plane magnetic anisotropy is taught in col. 9, line 16 of Hirokane. See Action, page 4.

Again, the Examiner fails to point to a portion of Hirokane teaching thermal treatment of reading-out layer 3 wherein the crystalline structure of reading-out layer 3 is changed into a crystalline structure that has a high magnetic anisotropy such that a high magnetic anisotropy energy of reading-out layer 3 is coupled to recording layer 5. Instead, the Examiner alleges, without identifying any portion of the reference in support of her conclusion that “some kind” of crystalline structure change must occur. Applicant respectfully submits, “some kind” of structure change does not teach a crystalline structure that has a high magnetic anisotropy. Moreover, for at least the reasons set forth in the traversal of Claims 7 and 11 over the rejection under 35 U.S.C. §112, a high magnetic anisotropy as claimed is not taught by an energy that is merely high as compared to any other layer. Moreover, the portion of Hirokane relied upon by the Examiner to teach an in-plane magnetic anisotropy, expressly teaches that were “in-plane magnetic anisotropy becomes too strong...a satisfactory exchange-coupling state cannot be realized” (emphasis added). See Hirokane, col. 9, lines 16-17. Thus, even if “some kind” of crystalline structure change occurs in Hirokane, it is certainly not one which results in the crystalline structure having a high magnetic anisotropy as the phrase is used in Claims 7 and 11.

For at least the foregoing reasons, Applicant respectfully submits Hirokane fails to teach all the elements of Claims 7 and 11. Since each and every element of Claims 7 and 11 are not taught by Hirokane, anticipation may not be found. Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 7 and 11 under 35 U.S.C. §102(b).

In regard to Claims 8-9 and 12-13, these claims depend from Claims 7 and 11 respectively and incorporate the limitations thereof. Thus, for at least the reasons discussed above in regard to Claims 7 and 11, Hirokane does not anticipate these claims. Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 8-9 and 12-13 under 35 U.S.C. §102(b).

IV. Allowable Subject Matter

Applicant respectfully acknowledges the Examiner's recognition that Claims 10 and 14 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, second paragraph and to include all of the limitations of the base claim and any intervening claims. Although Applicant believes the claims are allowable for being dependent on allowable base claims, in order to expedite prosecution of this case, Applicant submits herewith amendments to Claims 10 and 14 in which the claims have been rewritten to include the limitations of the base claims and any intervening claims. In view of the foregoing, Applicant respectfully requests reconsideration and allowance of Claims 10 and 14.

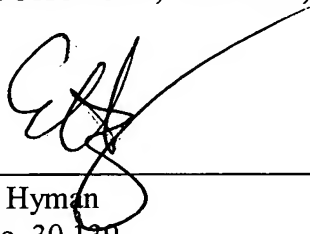
CONCLUSION

In view of the foregoing, it is believed that all claims now pending are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

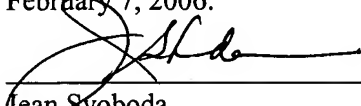
Dated: February 7, 2006

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on February 7, 2006.


Jean Svoboda